Extron® Electronics

INTERFACING, SWITCHING AND DISTRIBUTION

RGB 580xi – Remote Access Interface

RS-232 controllable

Female 15-pin HD input

Remote stereo audio input

Remote horizontal shift encoder connector

Remote contact closure for input selection

300 MHz (-3dB) video bandwidth

Variable level and peaking controls

Advanced Digital Sync Processing (ADSP™)

Active Audio Interfacing

Architectural Adapter Plates (AAPs) available in various configurations

Remote two-color power LED

International internal power supply

Description

RGB 580xi

Extron's **RGB 580xi** is a universal computer-video interface designed to give users discreet, remote access to interface connections and controls. The RGB 580xi provides exceptional computer-video interfacing features for use in applications where the interface is designed to be located out of sight. There are two components to the RGB 580xi—a double-space Architectural Adapter Plate (AAP) and a full-sized, interface enclosure designed to mount under a surface. Users connect computer video and audio to the interface through a female 15-pin HD connector on the small, inconspicuous AAP. The computer-video signal is then transmitted to the RGB 580xi interface enclosure over connecting cables and output to a display device on five female BNCs.

The RGB 580xi is compatible with VGA, SVGA, XGA, SXGA, UXGA, Mac, Sun, SGI, and other computer-video signals. It has a video bandwidth of 300 MHz (-3dB) and a horizontal frequency range of 15 kHz to 150 kHz. It outputs RGBHV, RGBS, and RGsB on five female BNCs. The RGB 580xi features Extron's exclusive Advanced Digital Sync Processing (ADSP™), which provides all-digital sync processing so stable images are produced on digital display devices (DLP, LCD, and plasma). Audio interfacing converts computer-generated, unbalanced audio to line-level balanced audio.

There are four different configurations of user controls available to populate the RGB 580xi AAPs, giving system designers the flexibility to select which controls are needed for specific installations. These are:

- **RGB 580xi AAP:** female 15-pin HD input, 3.5 mm stereo audio jack, and a two-color LED to indicate power and signal-present;
- **RGB 580xi I AAP:** female 15-pin HD input, 3.5 mm stereo audio jack, two-color LED (power and signal present), and input select button;
- **RGB 580xi S AAP:** female 15-pin HD connector, 3.5 mm stereo audio jack, two-color LED (power and signal present), and horizontal shift control;
- **RGB 580xi SI AAP:** female 15-pin HD connector, 3.5 mm stereo audio jack, two-color LED (power and signal present), input select button, and horizontal shift control.

The controls and connections from the AAP inputs are extended to the interface enclosure through cable assemblies. Each AAP version can be purchased with cable assemblies that are 3', 6', or 12' in length. Each AAP is also available in a grey, black, or white version.

RGB 580xi AAP

RGB 580xi S AAP

RGB 580xi I AAP

RGB 580xi SI AAP

Features

- **Bandwidth –** 300MHz (-3dB) video bandwidth.
- **Input connector –** The RGB 580xi AAPs provide a female 15-pin HD input connector.
- **Advanced Digital Sync Processing (ADSP) –** ADSP provides all-digital sync processing so that extraordinarily stable images are produced on digital display devices.
- **Balanced audio conversion –** Unbalanced computer-generated audio is input via a 3.5 mm mini jack and output as balanced line-level audio on a 3.5 mm captive screw connector.
- **15 memory presets –** The RGB 580xi remembers the last 15 computer inputs and recalls the centering adjustments.
- **Horizontal picture centering –** Allows the input signal to be shifted horizontally for a properly centered image on the display device.
- **Variable level and peaking –** Level and peaking compensate for signal losses over long cable runs. Level control adjusts the brightness level of the displayed image, and peaking control adjusts the sharpness level of the displayed image.
- **Adjustable vertical sync pulse width –** Choice of wide (default) or narrow sync pulse widths for greater compatibility with both CRT and digital displays.
- **Selectable sync polarity –** Sync polarity may be output as input or converted to negative polarity for separate horizontal and vertical sync.
- **Switch selectable sync output –** Five BNCs allow for composite and separate horizontal and vertical sync to be selected at the flip of a switch. Sync on green is also available.
- **RS-232 control –** Allows the RGB 580xi to be controlled via a third party control system.
- **Output –** Analog RGBHV, RGBS, RGsB, and balanced stereo audio.
- **Power –** Internal, 100VAC to 240VAC, 50/60 Hz, auto-switchable power supply.

Surface Applications

HSA 400

To optimize use of the Extron RGB 580xi, the Hideaway HSA 400 allows convenient, out-of-sight mounting of the interface in a remote location, away from the interface connections and controls.

- Easy access to interface controls and connectors.
- RJ-45 (CAT 6) and RJ-11 network and data connectors.
- Easy installation of two double-space Extron Architectural Adapter Plates.
- Compact size (top plate, outer rim): 7.9" W x 6.3" D.
- Mechanical movement and latching mechanism for durability.

SPECIFICATIONS

Video — RGB 580xi

Gain ..... 0.5V to 1.45V p-p
Bandwidth ..... 300 MHz (-3dB)

Video input — RGB 580xi

Number/signal type ..... 1 analog RGBHV, RGBS, RGsB, RsGsBs
Connectors ..... 1 15-pin HD female
Minimum/maximum levels ..... Analog —0.3V to 1.45V p-p with no offset
Impedance ..... 75 ohms or high Z, switchable (set to 75 ohms if no local monitor is connected)
Horizontal frequency ..... Autoscan 15 kHz to 150 kHz
Vertical frequency ..... Autoscan 40 Hz to 140 Hz
Return loss ..... -30dB @ 5 MHz
Maximum DC offset 4V

Video input — RGB 580xi AAP, RGB 580xi I AAP, RGB 580xi S AAP, RGB 580xi SI AAP

Number/signal type ..... 1 analog RGBHV, RGBS, RGsB, RsGsBs
Connectors ..... 1 15-pin HD female

Video output — RGB 580xi

Number/signal type ..... 1 analog RGBHV, RGBS, RGsB
Connectors ..... 5 BNC female
Minimum/maximum levels ..... 0.3V to 1.30V p-p with 0.7V p-p nominal input level
Impedance ..... 75 ohms
Return loss ..... -30dB @ 5 MHz
DC offset ..... ±5mV maximum with input at 0 offset

Video output — RGB 580xi AAP, RGB 580xi I AAP, RGB 580xi S AAP, RGB 580xi SI AAP

Number/signal type ..... 1 analog RGBHV, RGBS, RGsB
Connectors ..... 1 15-pin HD female

Sync

Input type ..... RGBHV, RGBS, RGsB, RsGsBs
Output type ..... RGBHV, RGBS, RGsB
Input level ..... 2V to 5.5V p-p with ±0.2VDC offset max.
Output level ..... TTL: 4V to 5V p-p
Input impedance ..... 10 kohms
Output impedance ..... 75 ohms
Max. propagation delay ..... 85 nS
Max. rise/fall time ..... 2 nS
Polarity ..... RGBHV: Polarity follows input when RGBHV is input and the sync polarity switch is set to Off. Sync polarity is negative if the sync polarity switch is set to On.
RGBS, RGsB: Negative

Audio

Gain ..... Unbalanced 0dB, balanced +6dB
Frequency response ..... 20 Hz to 20 kHz, ±0.05dB
THD + Noise ..... 0.03% @ 1 kHz, 0.3% @ 20 kHz at rated maximum output drive
S/N ..... >90dB at rated maximum output drive, balanced
Stereo channel separation ..... >90dB @ 1 kHz to 20 kHz

Audio input

Number/signal type ..... 1 PC level stereo, unbalanced
Connectors ..... 1 3.5 mm stereo jack (female) (2 channel); tip (L), ring (R), sleeve (ground)
Impedance ..... >10 kohms, unbalanced, DC coupled
Maximum level ..... +8.5dBu, (balanced or unbalanced) at stated %THD+N

Audio output

Number/signal type ..... 1 buffered stereo (2 channel), balanced/unbalanced
Connectors ..... 1 3.5 mm, captive screw connector, 5-pole
Impedance ..... 50 ohms unbalanced, 100 ohms balanced
Gain error ..... ±0.1dB channel to channel
Maximum level (600 ohm) ..... > +14dBm, balanced or unbalanced at stated %THD+N

Control/remote — interface

Serial control port ..... RS-232, captive screw connector, 3-pole
Baud rate and protocol ..... 9600, 8-bit, 1 stop bit, no parity
Serial control pin configuration ..... 1 = TX, 2 = RX, 3 = GND
Program control ..... Extron's control program for Windows Extron's Simple Instruction Set™ – SIS™

General

Power ..... RGB 580xi: 100VAC to 240VAC, 50/60 Hz, 18 watts, internal, auto-switchable
Temperature/humidity ..... Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing
Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing
Rack mount ..... No, but furniture mountable with under-desk mounting kit #70-077-01.
Enclosure type ..... Metal (vented)
Enclosure dimensions
RGB 580xi ..... 1.75" H x 6.4" W x 6.0" D
4.4 cm H x 16.3 cm W x 15.0 cm D
(Depth excludes connectors.)
RGB 580xi AAP models (double-space AAP plates)
Faceplate ..... 1.4" H x 3.5" W (3.6 cm H x 8.9 cm W)
Circuit board ..... 1.3" H x 2.5" W x 0.9" D
(3.3 cm H x 6.4 cm W x 2.3 cm D)
(Depth excludes connectors and knobs.)
Shipping weight ..... AAP models: 1 lb (0.5 kg)
RGB 580xi: 3 lbs (1.4 kg)
Vibration ..... ISTA/NSTA 1A in carton (International Safe Transit Association)
Approvals ..... UL, CUL, CE, FCC Class A
MTBF ..... 30,000 hours
Warranty ..... 2 years parts and labor

Part Numbers

RGB 580xi 60-362-01

RGB 580xi AAP 3' (Grey).....70-128-01
RGB 580xi AAP 6' (Grey).....70-129-01
RGB 580xi AAP 12' (Grey).....70-130-01

RGB 580xi AAP 3' (Black) 70-128-02
RGB 580xi AAP 6' (Black) 70-129-02
RGB 580xi AAP 12' (Black) 70-130-02

RGB 580xi AAP 3' (White) 70-128-03
RGB 580xi AAP 6' (White) 70-129-03
RGB 580xi AAP 12' (White) 70-130-03

RGB 580xi I AAP 3' (Grey) 70-131-01
RGB 580xi I AAP 6' (Grey) 70-132-01
RGB 580xi I AAP 12' (Grey) 70-133-01

RGB 580xi I AAP 3' (Black).....70-131-02
RGB 580xi I AAP 6' (Black).....70-132-02
RGB 580xi I AAP 12' (Black).....70-133-02

RGB 580xi I AAP 3' (White) 70-131-03
RGB 580xi I AAP 6' (White) 70-132-03
RGB 580xi I AAP 12' (White) 70-133-03

RGB 580xi S AAP 3' (Grey) 70-134-01
RGB 580xi S AAP 6' (Grey) 70-135-01
RGB 580xi S AAP 12' (Grey) 70-136-01

RGB 580xi S AAP 3' (Black).....70-134-02
RGB 580xi S AAP 6' (Black).....70-135-02
RGB 580xi S AAP 12' (Black).....70-136-02

RGB 580xi S AAP 3' (White) 70-134-03
RGB 580xi S AAP 6' (White) 70-135-03
RGB 580xi S AAP 12' (White) 70-136-03

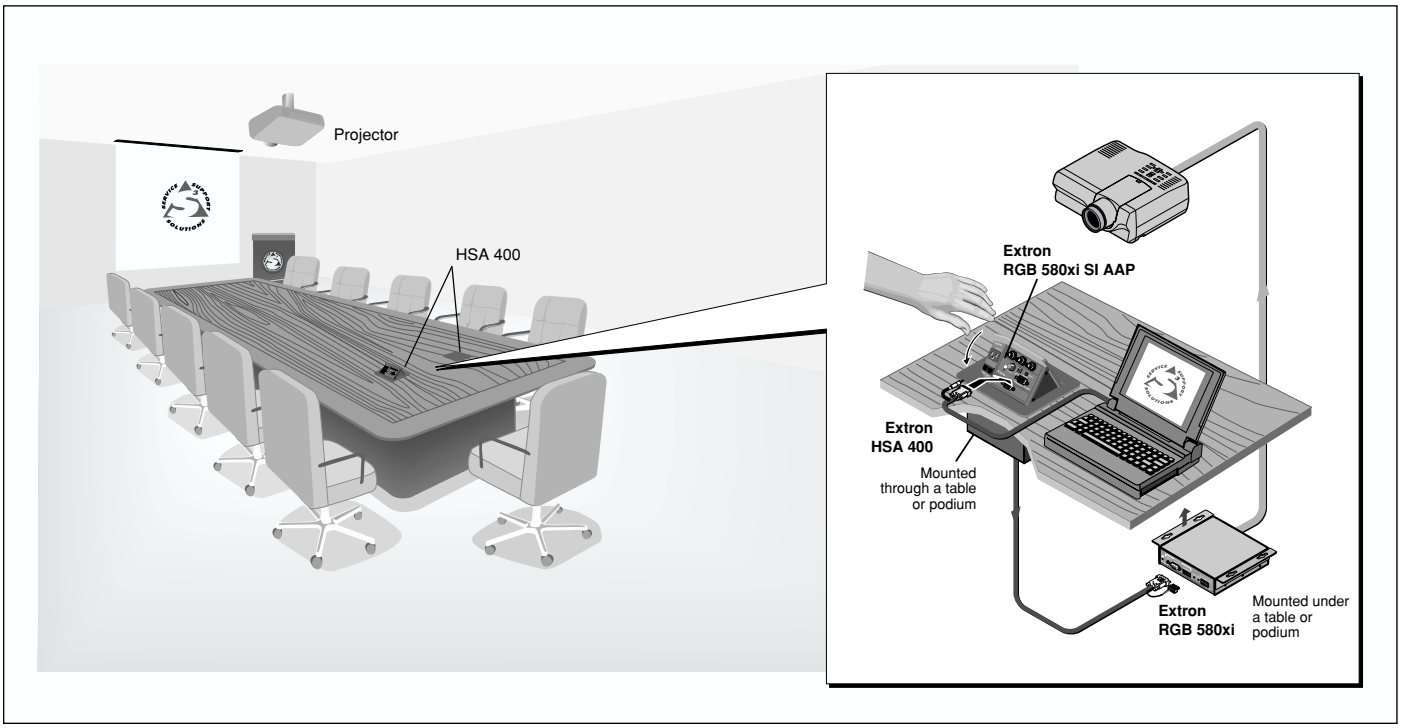
RGB 580xi SI AAP 3' (Grey) 70-137-01
RGB 580xi SI AAP 6' (Grey) 70-138-01
RGB 580xi SI AAP 12' (Grey) 70-139-01

RGB 580xi SI AAP 3' (Black) 70-137-02
RGB 580xi SI AAP 6' (Black) 70-138-02
RGB 580xi SI AAP 12' (Black) 70-139-02

RGB 580xi SI AAP 3' (White) 70-137-03
RGB 580xi SI AAP 6' (White) 70-138-03
RGB 580xi SI AAP 12' (White) 70-139-03

RGB 580xi AAP Replacement Cable Assemblies
3' Cable Assembly.....26-521-01
12' Cable Assembly.....26-521-03
12' Cable Assembly.....26-521-06

Application Diagram



Extron Electronics, USA
1230 South Lewis Street, Anaheim, CA 92805
800.633.9876 714.491.1500 FAX 714.491.1517
USA

Extron Electronics, Europe
Beeldschermweg 6C, 3821 AH Amersfoort
+31.33.453.4040 FAX +31.33.453.4050
The Netherlands

Extron Electronics, Asia
135 Joo Seng Rd. #04-01, PM Industrial Bldg.
+65.383.4400 FAX +65.383.4664
Singapore 368363

Extron Electronics Information
ExtronWEB™: www.extron.com
ExtronFAX™: 714.491.0192
24-hour access—worldwide!

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